

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A method of predicting sudden cardiac death comprising:
determining intra-cardiac impedance;
deriving a at least one physiologic cardiac parameter from the determined impedance, the physiological cardiac parameter comprising an ejection fraction;
generating trended data by trending the derived physiologic cardiac parameter parameters over spaced time intervals; and
predicting the onset of a sudden cardiac death episode using the trended data.

2. (Cancelled)

3. (Currently Amended) The method of claim 1 wherein the predicting step comprises the steps of:
comparing trends of the at least one physiologic cardiac parameter parameters;
and
detecting one or more differences between the trends.

4. (Cancelled)

5. (Currently Amended) A method of predicting sudden cardiac death comprising:
determining intra-cardiac impedance;
deriving at least one physiologic cardiac parameter from the determined impedance, The method of claim 1-wherein the deriving step comprises the steps of:
deriving a the at least one physiologic cardiac parameter when a patient is at rest;
and
deriving a the at least one physiologic cardiac parameter when the patient is not at rest[[.]];.

detecting a difference between the at least one physiologic cardiac parameter when the patient is at rest and the at least one physiologic cardiac parameter when the patient is not at rest;

trending the derived at least one physiologic cardiac parameter over spaced time intervals; and

predicting the onset of a sudden cardiac death episode using the difference.

6. (Cancelled)

7. (Currently Amended) The method of claim [[7]] 5 wherein the step of determining intra-cardiac impedance comprises measuring intra-cardiac impedance with an implanted device by applying a current between two electrodes of the device and measuring a resulting voltage that is used to calculate the intra-cardiac impedance.

8. (Currently Amended) A system for predicting sudden cardiac death episode, comprising:

a measuring device that measures intra-cardiac impedance;

a derivation module that derives a physiologic cardiac parameter from the measured impedance, the derived physiologic cardiac parameter comprising an ejection fraction; and

a trending module that trends the derived parameter over spaced time intervals to create trend data.

9. (Original) The system of claim 8 further comprising an analyzing module that analyzes the trend data to predict the onset of a sudden cardiac death episode.

10. (Currently Amended) The system of claim 9 wherein analysis of the trends comprises comparing the trends and detecting a difference between the trends.

11. (Currently Amended) The system of claim 8 further comprising a reporting module that reports the trend data ~~trends~~ to an outside source.

12. (Currently Amended) The system of claim 11 wherein the reporting module reports ~~trends~~ trend data that ~~predict~~ predicts the onset of a sudden cardiac death episode.

13. (Currently Amended) The system of claim 8 wherein the derivation module and the trending ~~device~~ module are packaged with the ~~an~~ implantable ~~implanted~~ measuring device.

14. (Original) The system of claim 13 wherein the package is capable of being implanted in a human body.

15. (Currently Amended) The system of claim 8 further comprising a an external device for storing the trend data.

16. (Cancelled)

17. (Original) The system of claim 8 wherein the physiologic cardiac parameter correlates to sympathetic and parasympathetic activity.

18. (Currently Amended) The system of claim 8 wherein the system downloads the trend data to a ~~separate~~ separately located storage device.

19. (Original) The system of claim 8 wherein the implanted device measures intracardiac impedance by applying a current between two electrodes and measuring a resulting voltage that is used to calculate the cardiac impedance.

20. (Original) The system of claim 19 wherein the electrodes are part of at least one unipolar lead and a remote device.

21. (Original) The system of claim 19 wherein the electrodes are part of at least one bipolar lead.

22. (Original) The system of claim 19 wherein the electrodes are part of at least one unipolar lead and a bipolar lead.

23. (Original) The system of claim 19 wherein the electrodes are part of at least one bipolar lead and a remote device.

24. (Currently Amended) A method of trending a cardiac parameter, comprising:
measuring an intra-cardiac impedance;
deriving a physiologic cardiac parameter using the measured impedance; and
generating trend data by trending the derived parameter over time; and
monitoring, using the trend data, at least one of a drug regimen, a progress of a
congestive heart failure disease condition, and an occurrence of a myocardial infarction.

25. (Currently Amended) The method of claim 24 wherein the measuring step comprises applying a current to a lead positioned within the heart, determining a voltage as a result of the applied current, and calculating an impedance based on the voltage.

26. (Original) The method of claim 24 wherein the impedance is measured at spaced time intervals.

27. (Original) The method of claim 24 wherein the physiologic cardiac parameter represents sympathetic nervous activity.

28. (Cancelled)

29. (Currently Amended) The method of claim 28 24 wherein tracking predetermined physiological indicators comprises predicting a sudden cardiac death episode using ejection fraction trend data.

30. (Currently Amended) The method of claim 28 24 wherein ~~tracking predetermined physiological indicators~~ the monitoring comprises monitoring a drug regimen.

31. (Currently Amended) The method of claim 28 24 wherein ~~tracking predetermined physiological indicators~~ the monitoring comprises detecting the occurrence of a myocardial infarction.

32. (Currently Amended) The method of claim 28 24 wherein ~~tracking predetermined physiological indicators~~ the monitoring comprises monitoring progress of congestive heart failure.

33. (Currently Amended) The method of claim 24 wherein the deriving ~~step~~ comprises calculating the parameter using the measured ~~impedance~~ impedance and storing the one or more calculated impedance values into an array.

34. (Currently Amended) The method of claim 33 wherein the trending ~~step~~ comprises comparing parameter values stored in the array.

35. (Currently Amended) The method of claim 24 28 ~~further~~ comprising ~~the step of~~ generating a signal when the trending data indicates that a threshold value for the predetermined physiological indicator has ~~be~~ been met.

36. (Currently Amended) The method of claim 24 28 ~~further~~ comprising ~~the step of~~ transmitting the trend data using a communications system.

37. (Currently Amended) The method of claim 24 28 ~~further~~ comprising the step of transmitting the trend data to a patient management system.

38. (Currently Amended) The method of claim 24 wherein the measuring, deriving, and trending steps are completed by a unitary implanted device.

39. (Original) A computer-readable medium having computer-executable instructions for the method recited in claim 24.

40. (Original) A computer data signal embodied in a carrier wave readable by a computing system and encoding a computer program of instructions for executing a computer program of instructions for executing a computer program performing the method recited in claim 24.

41. (Currently Amended) A device for trending a physiological cardiac parameter, comprising:

an impedance module that measures an intra-cardiac impedance at spaced time intervals;

a parameter module that calculates cardiac parameter values using the measured impedance;

a trending module that generates trend data using the calculated parameter values for monitoring at least one of a drug regimen, a progress of congestive heart failure, and whether a myocardial infarction has occurred.

42. (Original) The device of claim 41 wherein the parameter values represent a parameter selected from a group consisting of stroke volume, ejection fraction and pre-ejection period.

43. (Currently Amended) The device of claim 42 44 wherein the trending data is used to predict a sudden cardiac death episode and the parameter is an ejection fraction.

44. (Currently Amended) The device of claim 41 further comprising an analyzing module that analyzes trend data to track one or more predetermined physiological indicators.

45. (Cancelled)

46. (Currently Amended) The device of claim 44 wherein the predetermined physiological indicators monitoring comprises comprise monitoring progress of congestive heart failure.

47. (Currently Amended) The device of claim 44 wherein the predetermined physiological indicators comprise monitoring comprises determining if a myocardial infarction has occurred.

48. (Currently Amended) The device of claim 44 wherein the predetermined physiological indicators comprise monitoring comprises monitoring effects of a drug regimen on the patient.

49. (Currently Amended) The device of claim 44 wherein the predetermined physiological indicators comprising monitoring comprises monitoring changes in sympathetic tone.